AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Appln. No. 10/040,621
Attorney Docket No.: Q67687

AMENDMENTS TO THE SPECIFICATION

Please replace the first full paragraph appearing on page 7 of the specification with the following amended paragraph:

In step (a2), the texture distance between each color vector of each region of the query image and each color vector of each region of each data image may be calculated using:

$$d_t(I_1, I_2) = \sum_{i=1}^{N}\sum_{j=1}^{M}\left|\frac{m_{1ij} - m_{2ij}}{\sigma(m_{ij})}\right| + \sum_{i=1}^{N}\sum_{j=1}^{M}\left|\frac{\sigma_{1ij} - \sigma_{2ij}}{\sigma(\sigma_{ij})}\right|.$$

where $\sigma(m_{ij})$ ~~is the standard deviation of the mean value for a color vector for a region of the i-th frequency channel and j-th orientation channel, and where~~ and $\sigma(\sigma_{ij})$ ~~is~~ are the standard ~~deviation~~ deviations for all m_{ij}s and σ_{ij}s, respectively~~of the standard deviation of the color vector for a region of i-th frequency channel and the j-th orientation channel~~.

Please replace the first full paragraph on page 11 with the following amended paragraph:

In the image retrieval method, step (b-2) may comprise projecting the color and texture distances onto a 1-dimensional distance space using:

$$\cancel{d(I_q, I_1) = W_c d_c(I_q, I_1)\left(1 + \frac{2}{\pi}\tan^{-1}\frac{d_t'(I_q, I_1)}{d_c(I_q, I_1)}\right) + W_t d_t'(I_q, I_1)\left(1 + \frac{2}{\pi}\tan^{-1}\frac{d_c(I_q, I_1)}{d_t'(I_q, I_1)}\right)}$$

$$\cancel{\text{where } W_c = \frac{\varpi_c}{\varpi_c + \varpi_t}, \text{ and } W_t = \frac{\varpi_t}{\varpi_c + \varpi_t}}.$$

$$d(I_q,I_1)=W_c d_c(I_q,I_1)\left(1+\frac{2}{\pi}\tan^{-1}\frac{d_t'(I_q,I_1)}{d_c(I_q,I_1)}\right)+W_t d_t'(I_q,I_1)\left(1+\frac{2}{\pi}\tan^{-1}\frac{d_c(I_q,I_1)}{d_t'(I_q,I_1)}\right)$$

where $W_c = \frac{w_c}{w_c + w_t}$, and $W_t = \frac{w_t}{w_c + w_t}$.

Please replace first paragraph on page 18 of the specification with the following amended paragraph:

A distance function for two image regions based on their texture vectors is expressed as:

$$d_t(I_1,I_2)=\sum_{i=1}^{N}\sum_{j=1}^{M}\left|\frac{m_{1ij}-m_{2ij}}{\sigma(m_{ij})}\right|+\sum_{i=1}^{N}\sum_{j=1}^{M}\left|\frac{\sigma_{1ij}-\sigma_{2ij}}{\sigma(\sigma_{ij})}\right|.$$

where $\sigma(m_{ij})$ ~~is~~ and $\sigma(\sigma_{ij})$ are the standard deviations for all m_{ij}s and σ_{ij}s, respectively~~the standard deviation of the mean value for a color vector for a region of the i-th frequency channel and j-th orientation channel, and where $\sigma(\sigma_{ij})$ is the deviation of the standard deviation of the color vector for a region of i-th frequency channel and the j-th orientation channel~~.

Please amend the formula appearing on page 23 with the following amended formula:

$$\cancel{v_{m,k} = \frac{v_{m,k}-\mu_k}{3\sigma_k}} \quad \cancel{(15)}$$

$$v_{m,k} = \frac{v_k-\mu_k}{3\sigma_k} \quad (15)$$

Please replace the second full paragraph on page 24 with the following amended paragraph:

The normalized color and texture vector distances are combined by the following function (18) by weighting the color and texture vector distances with weighting factors:

$$\cancel{d(I_q,I_1)=W_c d_c(I_q,I_1)\left(1+\frac{2}{\pi}tan^{-1}\frac{d_t'(I_q,I_1)}{d_c(I_q,I_1)}\right)+W_t d_t'(I_q,I_1)\left(1+\frac{2}{\pi}tan^{-1}\frac{d_c(I_q,I_1)}{d_t'(I_q,I_1)}\right)\text{.........(18)}}$$

~~where~~ $\cancel{W_c=\frac{\varpi_c}{\varpi_c+\varpi_t}}$, ~~and~~ $\cancel{W_t=\frac{\varpi_t}{\varpi_c+\varpi_t}}$.

$$\underline{d(I_q,I_1)=W_c d_c(I_q,I_1)\left(1+\frac{2}{\pi}tan^{-1}\frac{d_t'(I_q,I_1)}{d_c(I_q,I_1)}\right)+W_t d_t'(I_q,I_1)\left(1+\frac{2}{\pi}tan^{-1}\frac{d_c(I_q,I_1)}{d_t'(I_q,I_1)}\right)\text{.........(18)}}$$

<u>where</u> $\underline{W_c=\frac{w_c}{w_c+w_t}}$<u>, and</u> $\underline{W_t=\frac{w_t}{w_c+w_t}}$.